CLAIMS

1. An optical medium consists of a cubic crystal material, said optical medium being characterized in that:

said crystal material is $\alpha\beta O_3$, where α is at least one of K, Ba, Sr, Ca, and β is at least one of Ta, Ti.

2. An optical medium consists of a cubic crystal material, said optical medium being characterized in that:

said crystal material is $KTaO_{3-d}$, where the amount of oxygen deficiency d is $0 \leq d < 10^{-7}$.

3. An optical medium consists of a cubic crystal material, said optical medium being characterized in that:

said crystal material is $KTa_{1-x}Nb_xO_3$, where composition x is $0 \leq x \leq 0.35$.

4. An optical medium consists of a cubic crystal material, said optical medium being characterized in that:

said crystal material is $K_{1-y}Li_yTaO_3$, where composition y is $0 \leq y \leq 0.02$.

5. An optical medium consists of a cubic crystal material, said optical medium being characterized in that:

said crystal material is $K_{1-y}Li_yTa_{1-x}Nb_xO_3$, where composition x is $0 \leq x \leq 0.35$ and y is $0 \leq y \leq 0.02$.

6. An optical lens characterized by comprising:

a cubic crystal material consisting of $\alpha\beta O_3$, where α is at least one of K, Ba, Sr, Ca, and β is at least one of Ta, Ti; and

a refractive index of more than 2.2 in the wavelength range of 360nm-800nm, and a transmission of 80% or more with a 10mm thickness.

7. An optical lens according to Claim 6, wherein said cubic crystal is $KTaO_{3-d}$, where the amount of oxygen deficiency d is $0 \leq d < 10^{-7}$.

8. An optical lens according to Claim 6, wherein said cubic crystal is $KTa_{1-x}Nb_xO_3$, where composition x is $0 \leq x \leq 0.35$.

9. An optical lens according to Claim 6, wherein said cubic crystal is $K_{1-y}Li_yTaO_3$, where composition y is $0 \leq y \leq 0.02$.

10. An optical lens according to Claim 6, wherein said cubic crystal is $K_{1-y}Li_yTa_{1-x}Nb_xO_3$, where composition x is $0 \leq x \leq 0.35$ and y is $0 \leq y \leq 0.02$.

11. An optical prism characterized by comprising:

a cubic crystal material consisting of $\alpha\beta O_3$, where α is at least one of K, Ba, Sr, Ca, and β is at least one of Ta, Ti; and

a refractive index of more than 2.2 in the wavelength

range of 360nm-800nm, and a transmission deterioration of 1% or less under a 10-minute irradiation with an irradiation intensity of 2.2W/cm^2.

12. A prism according to Claim 11, wherein said cubic crystal is $KTaO_{3-d}$, where the amount of oxygen deficiency d is $0 \leq d < 10^{-7}$.

13. A prism according to Claim 11, wherein said cubic crystal is $KTa_{1-x}Nb_xO_3$, where composition x is $0 \leq x \leq 0.35$.

14. A prism according to Claim 11, wherein said cubic crystal is $K_{1-y}Li_yTaO_3$, where composition y is $0 \leq y \leq 0.02$.

15. A prism according to Claim 11, wherein said cubic crystal is $KTa_{1-x}Nb_xO_3$, where composition x is $0 \leq x \leq 0.35$.